

**U.S. UTILITY PATENT APPLICATION
DOCKET NO. BP 1904**

ABSTRACT OF THE DISCLOSURE

A DSP based SERDES performs compensation operations to support high speed de-
serialization. A receiver section of the DSP based SERDES includes one or more ADCs and
DSPs. The ADC operates to sample (modulated) analog serial data and to produce digitized
5 serial data (digital representation of the modulated analog serial data). The DSP
communicatively couples to the ADC and receives the digitized serial data. Based upon the
known characteristics of the digitized serial data and the digitized serial data itself, the DSP
determines compensation operations to be performed upon the serial data to compensate for
inadequacies of the receiver and/or channel response. These compensation operations may be
(1) performed on the analog serial data before digitization by the ADC; (2) applied to the ADC
to modify the operation of the ADC; and/or (3) performed on the digitized serial data by the
DSP or another device.